L-108

OCT 12, 1987
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Department of Energy
Pacific Area Support Office
P.O. Box 29939
Honolulu, HI 96820

12 OCT 1987

Addressees

OPERATIONS PLAN 88-2, FY 1988, LLNL TO BIKINI, RONGELAP AND MAJURO

The enclosed Operations Plan has been coordinated with Dr. William Robison (LLNL); Keith Coberly (USO, Kwajalein), and John Brown (DOE Coordinator, Kwajalein).

Any travel changes are to be made directly with H&N/PO, Judy Honda, phone (808) 422-9221.

Any other additions, changes, or questions should be directed to H&N/PO, Kent Hiner, phone (808) 422-9221.

J. H. Dryden
Director

OP-315:KH

Enclosure

John Rudolph's Files
Letter Files
Letters Marshall Islands - 1987

OPERATIONS PLAN 88-2
MISSION NO. 2, FY 1988

BIKINI/RONGELAP/MAJURO

I. BACKGROUND AND PURPOSE

Lawrence Livermore National Laboratory (LLNL) on behalf of DOE conducts terrestrial investigations to measure and analyze radionuclides in the environment at Bikini and other atolls in the Marshall Islands. From these investigations, dose assessments to man are formulated and the results are made available to the Bikinians, their Government, and other interested entities. Another major aspect of the program is to conduct experiments aimed at reducing the inventory of radionuclides in the soil so as to otherwise limit their entrance into the food chain.

The Bikini Atoll Rehabilitation Committee (BARC), established in 1982 through the Department of Interior, is authorized and funded by the U.S. Congress to study and report on the feasibility and the cost of rehabilitating Bikini Atoll. A significant task of BARC is to investigate how radioactive contamination of Bikini can be reduced while at the same time respecting the Atoll's biological and environmental integrity.

Since the scientific objectives of the LLNL and the recommendations of the BARC are so complementary and similar with respect to Bikini Atoll, the two organizations have agreed to collaborate on scientific field work on Bikini under DOE sponsorship. The mission and objectives which are for the most part, outgrowths of previous work conducted by LLNL at Bikini, are described below:

II. RESPONSIBILITIES

A. Administration and Support

The Department of Energy, through its integrated contractor, Holmes & Narver, Inc., operates a base camp on the island of Bikini, a satellite camp at Eneu Island, and a 135 foot seagoing vessel based at Kwajalein which is assigned to support missions in the field.

The DOE authority during field missions will be exercised by a Field Representative or, in his absence, by a Senior Holmes & Narver Representative, who will be responsible for overall administration and coordination of support to scientific users, and direction of all logistical management activities, including communications and safety. Day to day camp administration will be provided by the H&N Site Manager.

B. Scientific Activities and Operations

During the field mission, all scientific activities will be directed by the Party Chief. The Party Chief will request logistical and other support as needed from the DOE Representative and/or the H&N Field Representative.

C. All vessel operations at sea or within the lagoon are under the control and direction of the Captain, who will work in close coordination with the Field Representative and the Party Chief in providing mission support as requested. Final authority as to the movement of the ship and its associated small boats and/or marine activities rest with the Captain.

III. WORK TO BE PERFORMED

Bikini

1. Collect plants from initial irrigation and control sites.
2. Collect samples from the second phase irrigation plots.
3. Collect well water samples from Bikini and Eneu.
4. Collect samples from N,P,K plot (coconut, grass, etc.).
5. Collect samples from the "high K" trees on Bikini and Eneu.
6. Fertilize appropriate "high K" trees.
7. Collect samples for the CE study.
8. Collect samples from the K rate trial experiment.
9. Collect samples from the super K trees.
10. Collect coco fronds from the excavation and control plots.
11. Collect samples from "clino" study.
12. Replant as necessary phase I irrigation plot.
13. Gamma Spectroscopy of all sites including permanent trees.
14. Collect samples from the ion penetration study.
15. Collect coco fluid from trees in phase II irrigation plot and neighboring trees that were not irrigated.
16. Collect samples from accelerated leaching experiments.
17. Start living wall garden root crop system.
18. Collect bulk soils from Bikini for lab experiments 20 gal. each for: 0-10 cm, 10-25 cm, 25-40 cm, and 40-60 cm.
19. Leaching of canopy: middle age and senescent leaves; intact recent litter.
20. Weigh crops from the food-mass production study.
21. Fertilize 4 breadfruit trees.

Majuro

1. Collect fresh coconut, pandanas and breadfruit samples.
2. Catch samples of Mullet and Goat fish.

Rongelap

1. Duplicate sample collection in conjunction with Henry Kohn's effort.

IV. PERSONNEL (See attached "NOV-DEC BIKINI MISSION CALENDAR")

V. ITINERARIES (See attached "NOV-DEC BIKINI MISSION CALENDAR")

VI. TRANSPORTATION SCHEDULE

a) Airlines of the Marshall Islands

11-25-87 (11-26-87)
Diversion
Maj-Kwaj-Enwtk-Bik-Kwaj-Maj

12-7-87 (12-8-87)*
Charter
Kwaj-Bik-Kwaj

12-9-87 (12-10-87)
Diversion
Maj-Kwaj-Bik-Enwtk-Kwaj-Maj

b) Liktanur (see attached "NOV-DEC BIKINI MISSION CALENDAR)

VII. LOGISTICAL SUPPORT REQUIREMENTS

a) Holmes & Narver, Inc.

1) Arrange travel, entry, hotel, vehicle, vans, etc., for LLNL as prescribed in William Robison Ops Plan and other authorized organizations.

2) Provide necessary support staff.

3) Assure that all mission related material and equipment is at the proper location to support the mission.

b) DOE Coordinator, Kwajalein

1) Prepare and coordinate the loading onto the Liktanur all related material and equipment for the mission. Standard equipment should include Sleeping Van and a Matson Walk-in Freezer.

2) Arrange billeting, retail store ID cards, vehicles, bicycles and other related items for mission personnel during their stay at Kwajalein.

3) Coordinate with Field Stations their requirements for POL and pass those requirements onto the Captain of the Liktanur.

c) DOE Coordinator, Majuro

1) Make arrangements to hire and transport Marshallese workers as requested in support of the mission.

2) Make arrangements for hotel, transportation and

other related request as stated in "Operations Plan".

d) USO

1) Coordinate with DOE Coordinator, Kwajalein, on mission preparations.

2) Coordinate fuel requirements with all Field Station Managers through DOE Coordinator.

3) Provide billeting and support as required.

VIII. FUNDING

General program charges are to be levied against existing Financial Plan for support at Bikini, except for specific costs incurred by the various "other" organizations. These costs will be recorded by the Holmes & Narver representative and subsequent billings will be made to users. These reimbursables will then be credited to the "Bikini Support Program".

IX. REPORTS

All Party Chiefs are to file a written report to the Director of PASO with an information copy to the Assistant to the Manager for Off-Continent Operations, NV. These reports must be submitted within 30 days from the completion of the trip.

* Charter date is only tentative. It will either occur on the 7th or 8th. It will be determined by which air plane is available on which day. AMI will notify use later in October. All users will be informed at that time.

key

B - Bikini
DIV - AMI diversion
E - Enewetak
H - Honolulu
J - Johnston
K - Kwajalein
M - Majuro
R - Rongelap
T - Transit
TL - Transit on Liktanur

NOV-DEC BIKINI/MAJURO/RONGELAP MISSION

CALENDAR

organizations

AGRI - Agricultural Consultant
BARC - Bikini Atoll Rehabilation Committee
H&N - Holmes & Narver/Honolulu
H&N/A - Holmes & Narver/Albuquerque
H&N/LV - Holmes & Narver/Las Vegas
H&N/M - Holmes & Narver Marshallese worker
LLNL - Lawrence Livermore National Laboratory

	november																december																				
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1 ANJALOK, R., H&N/M	B	B	B	B	B	B	B	B	B	B/K	K								H	H/K	K	K/B	B	B/E	E	*													
2 AGUILIMA, N., DOE																			H	H/K	K	K/B	B	B/K/H	H														
3 BAIER, Kittie, DOI																			H	H/K	K	K/B	B	B/K/H	H														
4 BOLLING, G., DOE																			J	J/K	K	K/B	B	B/E	E	*													
5 BROWN, H., DOE																			H	H/K	K	K/B	B	B/E	E	*													
6 CELIK, J., US Cong																			H	H/K	K	K/B	B	B/K/H	H														
7 CLEGG, B., LLNL								H	H/K	K/B	B	B	B	B	B	B	B	B	B	B	B	B/K/H	H															
8 CROW, S., US Cong																			H	H/K	K	K/B	B	B/K/H	H														
9 CUSHING, F., US Cong																			H	H/K	K	K/B	B	B/K/H	H														
10 DeBRUM, R., DOE		M	M/K	K/TL	TL/B	B/TL	TL/R	R	R/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/E	E	*													
11 BRYDEN, Joe, DOE																			H	H/K	K	K/B	B	B/E	E	*													
12 ESTES, C., US Cong																			H	H/K	K	K/B	B	B/K/H	H														
13 FRY, CLEO, LLNL	H	H/K	K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/K/H	H															
14 GILES, R., H&N	J	J/K	K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/K/H	H	H	H	H	H/J	J								
15 GURROLA, A., H&N/LV																			H	H/K	K	K/B	B	B/E	E	*													
16 HARRY, F., H&N/M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/K	K														
17 HINER, Kent, H&N			H	H/J	J	J/M	M	M	M/K	K/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/E	E	*													
18 HUMEKE, B., BMA																			J	J/K	K	K/B	B	B/E	E	*													
19 JACKSON, W., DOE	H	H/K	K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/E	E	*													
20 JOHNSON, J., LLNL	H	H/K	K	K/TL	TL/B	B/TL	TL/R	R	R/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B/K	K	K	K	K/H	H												
21 JONES, M., LLNL	H	H/K	K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/K/H	H																
22 KAROMA, M., H&N/M		M	M/K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/M	M																
23 KEMOTO, A., H&N/M		M	M/K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/M	M																
24 KRAUSE, P., US Cong																			H	H/K	K	K/B	B	B/K/H	H														
25 LAPJOMA, T., H&N/M										E/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
26 MADISON, E., H&N/M		M	M/K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
27 MADISON, C., H&N/M		M	M/K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/M	M																
28 MANSUR, A., DOI																			H	H/K	K	K/B	B	B/K/H	H														
29 MIGVAR, L., AGRI	H	H/K	K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/K/H	H																
30 OBIT, B., H&N/M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/E	E														
31 OLIVAL, M., H&N	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	R	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
32 PHILLIPS, M., LLNL								H	H/K	K/B	B	R	B	B	B	B	B	B	B	B	B	B/K/H	H																
33 RENDER, J., LLNL	H	H/K	K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/K/H	H																
34 ROBISON, B., LLNL			H	H/J	J	J/M	M	M	M/K	K/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/E	E	*													
35 SAVINE, T., US Cong																			H	H/K	K	K/B	B	B/K/H	H														
36 SELK, Kenny, H&N	H	K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/K/H	H														
37 SHIPLET, R., H&N/A																			H	H/K	K	K/B	B	B/K/H	H														
38 STONE, E., BARC	H	H/K	K	K/TL	TL/B	B/TL	TL/R	R	R/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/K/H	H														
39 STUART, M., LLNL	H	H/K	K	K/TL	TL/B	B/TL	TL/R	R	R/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B/K	K	K	K	K/H	H												
40 THOMSEN, S., US Amb MI																					M	M/B	B	B/E	E	*													
41 UNKNOWN, H&N/M		M	M/K	K/TL	TL/B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B/M	M																
42 UNKNOWN COOK				B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B																
LIKTANUR	K	K	K	K/T	T/B	B/T	R	R/T	T/B	B	B	B	B	B	B	B	B	B	B	B	B	D	B	B/T	T/K	K	K	K	K	K/T	T	T	T	T	T	T	T	T
AMI										DIV												CHTR		DIV					DIV										

	november																december																				
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

* UNDETERMINED TRANSPORTATION OUT OF ENEWETAK

AIR MIKE
[redacted]
11-17-87

FROM [redacted] TO KWAJ

FRY, CLEO, LLNL
JACKSON, R., DOE
[redacted], J., LLNL
JONES, M., LLNL
[redacted], L., AGRI
[redacted], J., LLNL
STONE, E., DARC
[redacted], R., LLNL

FROM JON TO KWAJ

BILES, R., H&N
[redacted] COOK, H&N

AIR MIKE
[redacted]
11-19-87

FROM [redacted] TO JON

MINER, KENT, H&N
ROBISION, B., LLNL

AIR MIKE
[redacted]
11-22-87

FROM JON TO MAJURO

MINER, KENT, H&N
ROBISION, B., LLNL

AIR MIKE
KWAJ-MAJ-HONO
11-24-87

FROM HONO TO KWAJ

CLEGG, B., LLNL
PHILLIPS, W., LLNL

FROM MAJ TO KWAJ

MINER, KENT, H&N
ROBISION, B., LLNL

AIR MIKE
HONO-MAJ-KWAJ
12-5-87

FROM HONO TO KWAJ

AQUILINA, N., DOE
BAIER, KITTIE, DOI
BROWN, H., DOE
CELIK, J., USC
CROW, S., USC
CUSHING, F., USC
DRYDEN, J., DOE
ESTES, C., USC
GURROLA, A., H&N
KRAUSE, PAT, USC
MANSUR, M., DOI
SAVINE, T., USC
SHIPLET, R., H&N

AIR MIKE
KWAJ-MAJ-HONO
12-7-87

FROM KWAJ TO HONO

CLEGG, B., LLNL
FRY, CLEO, LLNL
JONES, M., LLNL
NIGHAR, L., AGRI
PHILLIPS, W., LLNL
REMDER, J., LLNL
JACKSON, R., H&N

AIR MIKE
KWAJ-MAJ-HONO
12-9-87

FROM KWAJ TO HONO

BAIER, KITTIE, DOI
CELIK, J., USC
CROW, S., USC
CUSHING, F., USC
ESTES, C., USC
BILES, R., H&N
KRAUSE, PAT, USC
MANSUR, M., DOI
SAVINE, T., USC
SELK, K., H&N
SHIPLET, R., H&N
STONE, E., DARC

AIR MIKE
KWAJ-MAJ-HONO
12-11-87

FROM KWAJ TO HONO

JOHNSON, J., LLNL
STUART, M., LLNL